# Organisations & Data Management

# Database design tools, p 36

1. **Explain why design is an important step in creating a solution.**

The design is an important step in creating a solution as it is useful for representing structure/

# Naming conventions

1. **What is the importance of planning out naming conventions before you begin developing the solution? List examples of naming conventions for a database.**

It is important that every field and object within a database is names properly to that it can be easily identified by a user or a developer.

1. **What is to be avoided and how is readability assisted?**

When naming conventions, spaces and underscores are to be avoided. To aid readability, a mix of uppercase and lowercase characters should be used in the documents title.

1. **Describe the purpose of the following design tools:** 
   1. **data dictionary**

A data dictionary gives a developer a precise explanation of how each field should be set up in each table. This also provides details of built-in validation.

* 1. **data structure diagram**

A data structure diagram is used to indicate the relationships that exist between the specific tables of a planned database so that the developer will know how the tables are to be linked.

* 1. **entity-relationship diagram**

An entity-relationship diagram is used by designers to establish the interrelationships between different data elements.

* 1. **IPO chart**

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* 1. **query design and layout diagram**

The design of a query should specify the fields to be included and the tables to which they belong. The design will also include the criteria for the query and how the resulting records are to be ordered.

1. **What is the purpose of test data? What should be considered when developing test data?**

**Give some examples of electronic validation that can be established using database software**

A set of test data will be used dring development to ensure that the solution is functioning correctly is prepared in the design stage. The test data should be chosen to test all aspects of the solution, including identification and handling of unreasonable, missing or incorrect data (validation), formulas and summary totals like ‘Counts’ and ‘Sums’.

Electronic validation relies on software functions to perform checks on accuracy, completeness and reasonableness. These include range checks, spell checks, grammar checking, predefined lists, data type checking and input masks.